

REMARKS

By this amendment, claims 1 and 9 are amended. Claims 1-5, 7-11, 13-15, and 17-32 are pending. Support for the amended claims can be found in the previous claim set. No issue of new matter arises.

Rejections under 35 USC §112

Claims 1-5, 7-11, 13-15 and 17-32 were rejected under 35 USC §112, first and second paragraphs. The term “derivative” was cited as the basis for these rejections. Claims 1 and 9 are amended above thereby obviating this rejection. Reconsideration and withdrawal of this rejection are respectfully requested.

Rejection under 35 USC §102

Claims 1-5, 7-9, 11, 13, 19, 22, 24, 26, 28, 30 and 31 were rejected under 35 USC §102(a) over Cho. The Office Action indicated that an English copy of the priority document would overcome this rejection. Applicants plan to obviate this rejection by filing an English copy upon its receipt.

Rejections under 35 USC §103

Claims 1-5, 7-9, 11, 13, 17-19, 21, 22, 24, 26, 28, 30 and 31 were rejected under 35 USC §103(a) over Mandell in view of Wilson. Applicants respectfully traverse this rejection.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP §2143.

Mandell is alleged to teach retroviral vector containing DNA that encodes rat iodine transporter (Na⁺/I) NIS gene. Wilson is alleged to teach an adenoviral vector for gene delivery to all cell types.

Applicants respectfully submit that Mandell cannot properly be combined with Wilson. Wilson teaches a virus whose active component is an RNA molecule, whereas the vector of Wilson requires DNA. Accordingly there is no expectation of success from combining the disparate molecular structures. At least for this reason no *prima facie* case of obviousness can properly be said to have been established. Additionally, the means of combination are not believed to be enabled in part because an adequate written description of the final construct and the methods for

making same are not provided. Reconsideration and withdrawal of this rejection are respectfully requested.

Claim 10 was rejected under 35 USC §103(a) over Mandell and Wilson, as above, in further view of Sauvage. Applicants respectfully traverse this rejection. Deficiencies of the first two references to establish a *prima facie* case of obviousness are noted above. Sauvage does not remedy this deficiency. Accordingly, claim 10 is patentable over the applied art for at least the same reasons that claim 1 from which it ultimately depends is patentable over the applied art. Reconsideration and withdrawal of this rejection are respectfully requested.

Claims 14, 20, 23, 25, 27, 29 and 32 were rejected under 35 USC §103(a) over Mandell in view of Wilson, in further view of Hidaka. Applicants respectfully traverse this rejection. Deficiencies inherent in combining Mandell and Wilson are discussed above. Hidaka is not alleged to remedy the aforementioned deficiencies. Claims 14, 20, 23, 25, 27, 29 and 32 are patentable over the applied art for at least these same reasons.

Hidaka is alleged to teach an Ad5 expressing peroxidase gene for the purpose of understanding T-cell immunity. The Office Action alleges that it would have been obvious to combine a thyroid peroxidase gene with an iodine transporter for the purpose of facilitating "understanding of T cell immunity to thyroid peroxidase in patients with autoimmune thyroid disease and because both iodine and thyroid peroxidase are involved in normal thyroid function." Page 10, first paragraph.

The rationale underlying this rejection can only be said to occur through application of hindsight reasoning. For example, the thyroid peroxidase (TPO) of Hidaka is used to "express the human thyroid peroxidase (hTPO) in Epstein-Barr virus transformed human B-cell lines (EBVL) using a replication-defective recombinant adenovirus. Page 26, sentence bridging columns 1 and 2. Hidaka expressed a wish or expectation that hTPO might be expressed in other human cell lines. Page 26, column 2, lines 11 and 12. There is a leap to go from expressing a gene in an identified cell line for immunological research, to expressing multiple genes, for example the identical genes featured in the instant invention and further to apply these unrelated teachings to treatment of tumors, the subject of the present invention. The skilled artisan simply would not have been motivated to combine the teachings of Hidaka with those of the other applied references to achieve the instantly claimed invention. Even if the deficiencies of the previously discussed two references were overlooked, further application of Hidaka fails to establish a *prima facie* case of obviousness. It simply would not have been obvious to craft a research tool in a form in accordance with the instantly claimed invention using suggestions from the applied references. For at least this

additional reason Applicants respectfully submit that no *prima facie* case of obviousness has been established for this rejection of claims 14, 20, 23, 25, 27, 29 and 32. Reconsideration and withdrawal of this rejection are respectfully requested.

Conclusion

In view of the above amendments and remarks, Applicants respectfully request reconsideration and withdrawal of all pending rejections. Applicants respectfully submit that the application is now in condition for allowance and request prompt issuance of a Notice of Allowance. Should the Examiner believe that anything further is desirable that might put the application in even better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

Fees

No fees are believed to be necessitated by the instant response. However, should this be in error, authorization is hereby given to charge Deposit Account no. 18-1982 for any underpayment, or to credit any overpayments.

Respectfully submitted,



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